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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,408	11/20/2003	Nobumasa Sasa	KON-1836	9984
20311	7590	02/01/2006	EXAMINER	
LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			SHOSHO, CALLIE E	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/718,408	Applicant(s) SASA, NOBUMASA	
	Examiner Callie E. Shosho	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005 and 07 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

1. All outstanding rejections are overcome by applicant's amendment filed 11/23/05 and declaration filed 12/7/05.

It is noted that applicants filing on 11/23/05 of English translation of certified foreign priority document previously filed 11/20/03 perfects the foreign priority filing date.

The new grounds of rejection set forth below are necessitated by applicant's amendment and thus, the following action is final.

**Claim Rejections - 35 USC § 112**

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The scope of claim 7 is confusing given that the claim depends on a cancelled claim, namely, claim 2.

**Claim Rejections - 35 USC § 103**

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 3-8, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth (U.S. 5,889,084) in view of Watanabe et al. (U.S. 6,783,840)

Roth discloses actinic ray curable ink comprising colorant, 10-90% epoxidized soybean oil, and cationic photoinitiator including sulfonium salts. The ink possesses viscosity of 1-25 cP. There is also disclosed image formed by depositing ink from ink jet printer onto substrate (col.3, lines 38-54, col.5, lines 24-25, col.9, lines 32-60, col.10, lines 36-54, col.11, lines 14-23, and col.12, lines 4-7 and 19-25).

The difference between Roth and the present claimed invention is the requirement in the claims of oxetane.

Watanabe et al., which is drawn to curable ink composition, disclose the use of 0.8-65% oxetane compound such as 3-ethyl-3-(phenoxymethyl)oxetane or 3-ethyl-3-hydroxymethyl oxetane in order to improve water resistance, adjust viscosity, and reduce curing shrinkage (col.7, lines 60-65 and col.7, line 66-col.8, line 19)

In light of the motivation for using oxetane disclosed by Watanabe et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use oxetane in the ink of Roth in order to improve water resistance, adjust viscosity, and reduce curing shrinkage of the ink, and thereby arrive at the claimed invention.

6. Claims 1, 3-6, 8, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth (U.S. 5,889,084) in view of Maeda et al. (U.S. 6,805,439).

Roth discloses actinic ray curable ink comprising colorant, 10-90% epoxidized soybean oil, and cationic photoinitiator including sulfonium salts. The ink possesses viscosity of 1-25 cP.

There is also disclosed image formed by depositing ink from ink jet printer onto substrate (col.3, lines 38-54, col.5, lines 24-25, col.9, lines 32-60, col.10, lines 36-54, col.11, lines 14-23, and col.12, lines 4-7 and 19-25).

The difference between Roth and the present claimed invention is the requirement in the claims of oxetane.

Maeda et al., which is drawn to curable ink composition, disclose the use of oxetane such as in order to avoid cloudiness and odor when the cured ink is heated (col.2, lines 38-48 and col.9, lines 1-3).

In light of the motivation for using oxetane disclosed by Maeda et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use oxetane in the ink of Roth in order to produce ink that avoids cloudiness and odor when heated, and thereby arrive at the claimed invention.

#### **Response to Arguments**

7. Applicant's arguments regarding JP 02022370, Herrmann et al. (U.S. 6,332,943), Tabayashi et al. (U.S. 2004/0052968), Sato et al. (U.S. 2003/0054103), and Fujioka et al. (U.S. 4,012,559) have been fully considered but they moot in view of the discontinuation of the use of these references against the present claims.

8. Applicant's arguments filed 11/23/05 and declaration filed 12/7/05 have been fully considered, but with the exception of arguments relating to JP 02022370, Herrmann et al., Tabayashi et al., Sato et al., and Fujioka et al., they are not persuasive.

Specifically, applicant argues that Roth is not a relevant reference against the present claims in light of the declaration filed 12/7/05 which establishes unexpected or surprising results over the cited prior art.

The declaration compares ink of example 1 of Roth with ink within the scope of the present claims. It is shown that the ink of the present claims is superior in terms of ink storage stability and safety.

However, it is the examiner's position that the declaration is not successful in establishing unexpected or surprising results over the cited prior art given that the data in the declaration does not compare the presently claimed ink with ink of the "closest" prior art.

That is, the declaration utilizes ink of Example 1 of Roth which contains vinyl ether monomer, epoxy monomer, photoinitiator, and dye. Thus, the ink does not comprise epoxidized fatty acid ester or oxetane compound as presently claimed. Further, the ink contains vinyl ether monomer which is not required in the present claims. However, Roth do disclose the use of epoxidized soybean oil (col.5, lines 24-25) instead of the epoxy compound used in Example 1 and further, discloses that the use of vinyl ether monomer is not required, i.e. vinyl ether monomer is present in amount of 0-60%. Thus, while the declaration shows that the presently claimed ink is superior as compared to the ink of Example 1 of Roth, this is but one preferred embodiment. A fair reading of Roth as a whole discloses ink comprising colorant, epoxidized soybean oil, and photoinitiator with no utilization of vinyl ether monomer. Thus, the declaration is not persuasive given that while the declaration compares presently claimed ink with one preferred embodiment of Roth, a fair reading of Roth as a whole discloses embodiments of the ink that are closer to the presently claimed ink than that of Example 1.

Further, there is not proper side-by-side comparison between ink within the scope of the present claims and ink outside the scope of the present claims but within the scope of Roth. That is, the ink of Example 1 of Roth utilizes vinyl ether monomer. Given that the ink of Roth contains such vinyl ether monomer, it is not clear when comparing this ink to the ink of the present claims, whether the differences between the inks is due to the presence of oxetane or due to the presence of the vinyl ether monomer in the ink of Roth.

It is noted that there is no disclosure or suggestion of viscosity of the ink in Watanabe et al. Further, applicant's declaration establishes that the ink of Example 4 of Watanabe et al. possesses viscosity of 400 MPa s, which is outside the scope of the present claims. However, note that Watanabe et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of oxetane compound in actinic ray curable ink, and in combination with the primary reference, discloses the presently claimed invention.

In light of the above, it is the examiner's position that applicant's declaration is not successful in overcoming the rejections of record.

**Conclusion**

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
1/27/06